Date: Sat, 2 Oct 93 12:48:26 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1170
To: Info-Hams

Info-Hams Digest   Sat, 2 Oct 93   Volume 93 : Issue 1170

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 28 Sep 1993 18:22:42 MST
From: tribune.usask.ca!kakwa.ucs.ualberta.ca!ersys!adec23!adec23!ve6mgs!
usenet@decwrl.dec.com
Subject: Alcatel Special Event Station
To: info-hams@ucsd.edu

```
**************************************************************************
*                                                                        *
*         SSSSS   PPPPPP   EEEEEEE   CCCCC   I     A     L              *
*        S     S  P     P  E        C     C  I    A A    L              *
*        SS       P     P  E       C         I   A   A   L              *
*         SSSS    PPPPPP   EEEE    C         I   AAAAA   L              *
*             S   P        E       C         I  A     A  L              *
*        S     S  P        E        C     C  I  A     A  L              *
*         SSSSS   P        EEEEEEE   CCCCC   I  A     A  LLLLLLL        *
*                                                                        *
*                      E V E N T  S T A T I O N                           *
```

A T T E N T I O N A M A T E U R R A D I O O P E R A T O R S

A T T E N T I O N S H O R T W A V E L I S T E N E R S

The Alcatel Amateur Radio Association Will Operate

S P E C I A L E V E N T S T A T I O N

N 5 T B Q

(N 5 TEXAS BEST QUALITY)

I N R E C O G N I T I O N O F

N A T I O N A L Q U A L I T Y M O N T H

The Alcatel Amateur Radio Association will operate a special event station on Saturday, October 2, 1993 in recognition of National Quality Month. Radio station N5TBQ (Texas Best Quality), will operate from the Open House site of Alcatel Network Systems Inc in Richardson, Texas between the hours of 1500Z and 2100Z. Operation will be in the General Phone portions of:

40, 20, 15, and 10 meters.

For a unique QSL card, send your contact report to:

Alcatel Network Systems Inc
AARA, M/S 401-212
1225 North Alma Road
Richardson TX 75081-2206
USA

Thank you,

Frank Krizan - WA5ABU
President, AARA

Robert J. Grochowski BUS: 214-996-5587
Editor - The Paper Repeater
Newsletter of the Alcatel Amateur Radio Association

| Alcatel Network Systems Inc - Richardson, TX |
| |
| rjgrocho@rockdal.aud.alcatel.com |
|===|
| RES: |
| 1520 Ports O'Call Drive   PH: 214-964-5451 |
| Plano, TX 75075   Ham Call: N5UPF |
+---+

Date: Thu, 30 Sep 1993 18:22:46 GMT
From: csus.edu!netcom.com!netcomsv!cds8604!NewsWatcher!user@decwrl.dec.com
Subject: Best way to learn code?
To: info-hams@ucsd.edu

In article <28asm8$2g1@lester.appstate.edu>, RW884@CONRAD.APPSTATE.EDU
(Watkins, Robert Shawn   ) wrote:

> I am wanting to upgrade to general and was wondering what people
> thought is the best/easiest way to learn the code. I don't think
> I'll have a problem with the written part of the exam, but the code
> seems to be the biggest stumbling block. Any advice would be appreciated.
> Thanks in advance.
>
>   KE4FPZ

Code is everyone's biggest stumbling block. Soon we'll be adding
proficiency in native American languages and ability to run a mile in
under 6 minutes as upgrade criteria, so be happy all you have to do is
learn code.

My advice to those trying to learn code is to pretend you already know it.
Pretend you already know the code and get on the air and talk to people.

By the way, this is what most people do--even those that have higher class
licences.

"But I'll be discovered. I'll be exposed as a CW imposter," you say.

No you won't. Only people who really know the code will discover you and
guess what: they don't care. Everybody else will be so busy trying to
convince you THEY know the code they won't be spending any time realizing
you don't know it.

The key is to remember that all CW conversations (except between two people
who actually DO KNOW code) are identical. You need only be able to

recognize your call. As long as you can recognize your own call in CW, your in like bacteria on a decaying piece of lamb.

All CW conversations go like this:

DE (fillin blank)
TNX FER UR CALL OM
UR SIG 599 599
NAME HERE (fill in blank)
QTH (fill in the blank)
RIG IS ICOM 751A
ANT 4 EL YAGI
WX SUNNY TEMPS ABOUT 20 DEG C
SO HW OM?
DE (fillin blank)

Then he'll say some stuff you can ignore until you hear your call.

Then you say:

SOLID CPY DEAR FRIEND
TNX UR INFO
SRI, MUST CUT IT SHORT
TNX NICE QSO
BEST 73, GUD DX, GUD DAY, HPE CUAGN
DE (fill in blank) SK SK SK

You don't have to copy a single letter the other guy sends except for your call. If a QSL card comes, you can figure out who you were talking to. Otherwise, who cares?

If you do this 20 times a day you'll eventually get into the prediction mode--which is what copying CW is all about anyway. What? You don't get it?

It's like this: Most of copying CW has to do with knowing what the guy is going to say next. Once you realize that, your CW speed will increase.

Cheers,

Joe

--
Joe Mastroianni A.R.S. AA6YD | "Up the airy mountain,
jdm@cadence.com | Down the rushy glen,

74107,310:cserve | We daren't go a-hunting,
JOE-M:Genie | For fear of little men."
| - Allendale

The opinions expressed in this article do not reflect those of my employer

---

Date: 30 Sep 93 23:22:46 GMT
From: ogicse!mbsun.mlb.org!yyz!115-119!Joe.Mastroianni@network.ucsd.edu
Subject: Best way to learn code?
To: info-hams@ucsd.edu

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---
 * Origin: The Chicago Internet Gateway [CHIGATE.MCS.COM] (1:115/119.0)
SEEN-BY: 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112
E.MCS.COM] (1:115/119.0)
SEEN-BY: 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112

Date: Fri, 1 Oct 1993 06:17:42 GMT
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!jherman@ames.arpa
Subject: first sos in history
To: info-hams@ucsd.edu

In article <1993Sep28.173817.20711@super.org> weh@hume.super.org (Bill Holmes) writes:
>A trivial question that we would really appreciate some help on
>is "what ship sent the first sos signal?
>
>The second question that we would also really like to know is
>what signal was used for distress before the sos signal.
>
>We have looked through reference material with no luck so any
>help you can give will be greatly appreciated.
>
>73's
>

Just in case no one else has answered this your questions, the first RECORDED use of the SOS distress call came from the Titanic; previously, the prosign CQD was used for distress calls. The following is taken from the book, QTC, by Ray Redwood (quit laughing Derek!).

The following conversation took place between the Titanic's Captain E.J. Smith and his radio officers, Jack Phillips, and Mr. Bride; Bride survived the disaster to give this account to the New York Times:

2345 hours: Titanic Junior Operator Bride awakes. He hasn't felt the mild shock of collision, but the throb of the engine has ceased, and the lack of noise and vibration awakens him. He decides to go right on watch, though he isn't due until 0200. Phillips seemed very tired, working all day on those repairs, so Bride goes into the radio room, and takes the phones from his partner. Phillips says, "We must have hit something. The ship's stopped." At that moment, the door opens, and

in comes Captain Smith, bearded patriarch. He intends to retire after this voyage. "We've struck an iceberg, and I'm having an inspection made to tell what has been done to us. You'd better get ready to send out a call for assistance, but don't send it till I tell you." He hurries back to the bridge.

Bride and Phillips look at each other, then start laughing. They are on the world's biggest, strongest, safest ship. It's called "unsinkable". The weather is very calm. So they've been scratched by an iceberg? Watertight compartments have been designed to take care of that. The Old Man is just a fusspot, but that's part of his job.

0000 hours: Captain Smith is back at the door of the radio room."Send out the call for assistance," he orders. "Here's our position." He puts a slip of paper on the desk.

"Which call, Captain?" asks Phillips.

"The regular international call for help." The Old Man hurries away. Phillips is no longer laughing. He switches to full power, hits the key, "CQD CQD CQD DE MGY MGY MGY."

"Better use that new SOS signal," says Bride. [It had been adopted by international agreement in 1908, but CQD still lingered for Marconi operators.]

Phillips starts again: "CQD CQD CQD/SOS SOS SOS DE MGY MGY MGY HAVE STRUCK ICEBERG WE ARE BADLY DAMAGED TITANIC 41.46N 50.14W MASTER."

...

{Reprinted without permission of author}

Note this disaster took place on 14 April, 1912.

Jeff NH6IL (as a young fart: WA6QIJ)

Date: 1 Oct 93 11:17:42 GMT
From: ogicse!mbsun.mlb.org!yyz!115-119!Jeff.Herman@network.ucsd.edu
Subject: first sos in history
To: info-hams@ucsd.edu

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   Phillips starts again: "CQD CQD CQD/SOS SOS SOS DE MGY MGY MGY HAVE STRUCK ICEBERG WE ARE BADLY DAMAGED TITANIC 41.46N 50.14W MASTER."

...

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Note this disaster took place on 14 April, 1912.

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---
 * Origin: The Chicago Internet Gateway [CHIGATE.MCS.COM] (1:115/119.0)
SEEN-BY: 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112

SEEN-BY: 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112

Date: 1 Oct 93 15:38:00 GMT
From: ogicse!mbsun.mlb.org!yyz!115-119!D.RODMAN@network.ucsd.edu
Subject: Low angle radiation
To: info-hams@ucsd.edu

In article <1993Sep30.210045.22547@PacBell.COM>, sjhawk2@srv.PacBell.COM (Stephen Hawkins) writes...
>In the book,
>Amateur Radio Techniques by the Radio Society of Great Britain
>Seventh Edition
>
>Pg. 281
>Speaking of the early sixties he says:
>
>"Careful tests by the Americans showed clearly that the h.f.
>broadcasting stations controlled by the USSR and China were
>consistently out-performing their own, the British, and the
>Japanese stations. The Moscow and Peking signals seemed to be
>getting through on higher frequencies, for longer periods and at
>greater strength than those from other transmitters of comparable
>power. Equally interesting was the observed ability of these
>particular transmissions, a few minutes after coming on the air,
>or changing frequency, to peak up suddenly in strength in the
>particular areas to which the programmes were being beamed; this
>did not seem to be due to power increase since the signals in
>non-target areas showed no corresponding increase.
>
>   To account for these observations, it was suggested that the
>Russian and Chinese stations were in fact located at very high
>sites, and that this might make possible extremely low-angle
>radiation. Furthermore it was thought that a technique must have
>been developed whereby the vertical angle of radiation could be
>carefully controlled and changed to make optimum use of this

>ability; possible using some form of back scatter to allow the
>transmitter engineers to determine just when the optimum
>conditions had been achieved. All these theories suggested that
>the Russians had developed ways of utilizing propagation modes
>other than those described in the classic textbooks. ..."
>
>The article continues and goes on to make some interesting
>statements about what may be possible. My question is; has anyone
>ever read about or heard about this else where. I would be very
>interested in learning more about techniques for propagating R.F.
>at the low angles talked about. If anyone knows anything about
>this or where I can get any information please email or post the
>information to me. Thank you de Steve Hawkins WV6U

Well, Steve there are many examples of this in amateur practice.
The observations are emperical, but serve as excellent learning
tools. First, W1 stations consistantly out perform more in land
stations on DX contests. They are generally on high points overlooking
the ocean. Second, this topic is covered by Dave Leeson in his
text on yagi design. Suggest you read it. I belive in this
philosophy quite strongly, although there is no single model
of ionospheric propagation that will explain the dynamics of
signal movement across the earth. 73, Dave.
KN2M

---
 * Origin: The Chicago Internet Gateway [CHIGATE.MCS.COM] (1:115/119.0)
SEEN-BY: 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112
 115/747 2200/3 2112
@PATH: 115/999 119 747 2200/2112

Date: 1 Oct 93 21:43:40 GMT
From: ogicse!mbsun.mlb.org!yyz!115-119!Richard.Campbell@network.ucsd.edu
Subject: ORBS$275.2liners
To: info-hams@ucsd.edu

SB KEPS @ AMSAT $ORBS-275.N
2Line Orbital Elements 275.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM N3FKV HEWITT, TX   October 2, 1993
BID: $ORBS-275.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83 58 B 93269.62632466 -.00000053 00000-0 99999-4 0   376
2 14129 27.3156   4.2989 6026531 117.2716 315.3887 2.05880833 77357
UO-11
1 14781U 84 21 B 93273.60110102 .00000181 00000-0 34679-4 0 4427
2 14781 97.8037 295.3091 0012843 24.5844 335.5972 14.69058828512194
RS-10/11
1 18129U 87 54 A 93274.02182318 .00000088 00000-0 89554-4 0 6544
2 18129 82.9289 160.4043 0012963 29.9551 330.2339 13.72323681314367
AO-13
1 19216U 88 51 B 93269.09187191 -.00000232 00000-0 65920-3 0 6457
2 19216 57.8473 292.7149 7211645 324.9411   4.2235 2.09727479 68444
FO-20
1 20480U 90 13 C 93262.12161713 -.00000010 00000-0 65198-5 0 4565
2 20480 99.0281 100.4732 0540198 233.7673 121.2342 12.83221116169367
AO-21
1 21087U 91 6 A 93271.63376897 .00000084 00000-0 82656-4 0 8605
2 21087 82.9460 336.2742 0036941 92.9638 267.5716 13.74525333133654
RS-12/13
1 21089U 91 7 A 93271.88921976 .00000014 00000-0 88052-5 0 4267
2 21089 82.9212 205.2035 0029589 113.4076 247.0196 13.74026739132768
ARSENE
1 22654U 93031B   93253.49977207 -.00000056 00000-0 10000-3 0   236
2 22654   1.2946 120.3715 2933550 152.0186 99.4287 1.42203372 1781
UO-14
1 20437U 90005B   93273.74402670 .00000039 00000-0 22866-4 0 7767
2 20437 98.6085 356.8274 0010315 231.2276 128.7984 14.29793569192514
AO-16
1 20439U 90005D   93273.73976057 .00000032 00000-0 20232-4 0 5815
2 20439 98.6151 357.7986 0010489 232.0276 127.9958 14.29851668192529
DO-17
1 20440U 90005E   93273.71916563 .00000023 00000-0 16758-4 0 5831
2 20440 98.6160 358.0199 0010677 231.7721 128.2500 14.29988043192537
WO-18
1 20441U 90005F   93273.83012265 .00000031 00000-0 19837-4 0 5842
2 20441 98.6150 358.1481 0011162 231.6967 128.3213 14.29967002192559
LO-19
1 20442U 90005G   93273.75535182 .00000045 00000-0 25152-4 0 5811
2 20442 98.6159 358.2718 0011457 231.7620 128.2531 14.30058435192552
UO-22
1 21575U 91050B   93273.74550175 .00000092 00000-0 37922-4 0 2804
2 21575 98.4631 348.1156 0007889 352.8348   7.2724 14.36853144115824

```
KO-23
1 22077U 92 52  B 93263.67655469  .00000000  00000-0  99999-4 0  1156
2 22077  66.0792 124.2611 0001255 353.3278   6.7724 12.86279630 52121
AO-27
1 22825U 93061C   93274.12386161 -.00000103  00000-0 -33906-4 0    50
2 22825  98.6809 347.1732 0007375 241.9084 118.1352 14.27580958   727
IO-26
1 22826U 93 61  D 93272.86199979  .00000655  00000-0  28195-3 0    41
2 22826  98.6803 345.9208 0007952 245.7224 114.3082 14.27684427   538
KO-25
1 22827U 93061E   93274.12314011  .00000317  00000-0  14435-3 0    24
2 22827  98.6789 347.1689 0008256 229.1961 130.8504 14.27785690   728
PO-28
1 22829U 93 61  G 93272.52017860  .00002889  00000-0  11885-2 0    65
2 22829  98.6060 345.6230 0034766 196.6232 211.5064 14.27308199   498
NOAA-9
1 15427U 84123  A 93270.64371502  .00000096  00000-0  61218-4 0  4662
2 15427  99.0908 312.5447 0014265 238.9646 121.0126 14.13548181453256
NOAA-10
1 16969U 86 73  A 93273.05454252  .00000041  00000-0  25373-4 0  3102
2 16969  98.5172 284.9563 0014001  12.2442 347.9080 14.24833054365552
NOAA-11
1 19531U 88 89  A 93270.92231825  .00000073  00000-0  50010-4 0  2213
2 19531  99.1447 248.8132 0012208 146.2203 213.9754 14.12918124258182
MET-3/3
1 20305U 89086A   93273.86875201  .00000043  00000-0  10000-3 0  7395
2 20305  82.5458  90.3189 0014966 211.3850 148.6353 13.16023150189000
FY-1/2
1 20788U 90081A   93273.93341747  .00000177  00000-0  13993-3 0  6344
2 20788  98.8529 297.1371 0015867  19.0735 341.1022 14.01299199157382
MET-2/20
1 20826U 90086A   93273.83481420  .00000047  00000-0  36873-4 0  5869
2 20826  82.5293 352.3318 0014876  56.8293 303.4292 13.83559207151893
MET-3/4
1 21232U 91 30  A 93273.09340954  .00000043  00000-0  99999-4 0  4060
2 21232  82.5472 353.4800 0014452 113.4554 246.8089 13.16456469117126
NOAA-12
1 21263U 91 32  A 93271.08767618  .00000129  00000-0  66412-4 0  6772
2 21263  98.6498 299.2850 0012033 277.9887  81.9937 14.22313745123276
MET-3/5
1 21655U 91056A   93274.04083301  .00000043  00000-0  10000-3 0  4631
2 21655  82.5537 299.7610 0014526 119.9853 240.2720 13.16823685102349
MET-2/21
1 22782U 93 55  A 93272.04890292  .00000009  00000-0  26230-5 0   178
2 22782  82.5458  53.3688 0020914 237.8672 122.0460 13.82985484  3997
MIR
1 16609U 86017  A 93273.55553133  .00007726  00000-0  93742-4 0  3285
2 16609 051.6206 050.0286 0004335 158.3682 201.8178 15.59935938435560
```

```
HUBBLE
1 20580U 90037B   93273.92510529  .00000677  00000-0  56578-4 0  1965
2 20580  28.4692 102.7442 0004582  75.3996 284.7099 14.92845272187320
GRO
1 21225U 91 27  B 93274.05553739  .00032256  00000-0  18468-3 0    26
2 21225  28.4609 243.2107 0006141  87.0457 273.0958 15.77261674 16811
UARS
1 21701U 91063B   93273.96827791  .00003301  00000-0  31171-3 0  2573
2 21701  56.9841 117.6286 0004646  96.4517 263.7045 14.96165173112137
/EX
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Date: 1 Oct 93 12:21:20 GMT
From: ogicse!mbsun.mlb.org!yyz!115-119!John.Haddy@network.ucsd.edu
Subject: White Noise Generator
To: info-hams@ucsd.edu

In article <28cktv$a29@news.acns.nwu.edu>, lapin@casbah.acns.nwu.edu (Gregory
Lapin) writes:
|> In article <1993Sep24.183320.17983@mnemosyne.cs.du.edu>,
|> Mike Harris <mjharris@nyx.cs.du.edu> wrote:
|> ---stuff deleted---
|> >Not many of these methods really generate white noise. The preferred
|> >solution involves generating a pseudo random bit stream. In pratice this
|> >is very easy to do by using serial feedback to the load input of a shift
|> >registers. It is possible to generate sequences that take days to repeat
|> >using this method.
|>
|> Pardon my ignorance but can this really be called "white noise"?
|> Stationary white noise can be loosely defined as noise with equal energy
|> at all frequencies (ie. flat power spectrum).  Since true white noise is
|> conceptual only (physically unrealizable), most analog methods generate
|> "pink", or "colored" noise, which has a nearly flat PSD over a range of
|> frequencies.  Those that are based on thermal noise are generally
|> acknowledged to be very close approximations to true white noise for the
|> purposes of radio and microwave work.  What is the frequency response of
|> this digital method?
|>
```

To quote Horowitz and Hill:

"The output spectrum generated by maximal-length shift registers consistes of noise extending from the repeat frequency of the entire sequence, Fclock/K, up to the clock frequency and beyond. It is flat within 0.1dB up to 12% of the clock frequency (Fclock), dropping rather rapidly beyond its -3dB point of 44% Fclock."

In other words, for _Band_Limited_ white noise, a PN sequence generator is about as good as it gets.

Horowitz and Hill have a good intro to the topic (as they do on all topics!)

|> >
|> >_____
|> >> Michael J. Harris | 6m50@lfhp113.hso.link.com <
|> >> Sr. Systems Engineer | mikeh@blkbox.com OR <
|> >> CAE-Link Corporation | mjharris@nyx.cs.du.edu <
|> >> Houston TX | finger for pgp 2.0 key <
|> >-----
|> >
|> >--
|> >>>> Finger for my armored text pgp public key.
|> >>>> Internet:mjharris@nyx.cs.du.edu@ <<<
|>
|> Greg Lapin KD9AZ
|> glapin@nwu.edu

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  |  _  |_   _   |_|  _   _|  _|             Electronics Department
 |_| (_) | | | |  | | (_| (_| (_| \/          School of MPCE
 --------------------------------/-          Macquarie University
                                             Sydney, AUSTRALIA 2109
```

Email: johnh@mpce.mq.edu.au, Ph: +61 2 805 8959, Fax: +61 2 805 8983

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